

We claim:

1. A pulverulent phytosterol formulation comprising at least one
5 phytosterol having a mean particle size of from 0.01 to 100 μm .
2. A phytosterol formulation as claimed in claim 1, wherein at least one phytosterol is present in partially amorphous form.
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3. A phytosterol formulation as claimed in one of claims 1 or 2, wherein the phytosterol is embedded in a protective colloid matrix.
- 15 4. A phytosterol formulation as claimed in one of claims 1 to 3 comprising from 0.1 to 80% by weight of one or more phytosterols, with the percentages by weight being based on the dry matter of the powder.
- 20 5. A phytosterol formulation as claimed in claim 4 comprising from 5 to 70% by weight of one or more protective colloids.
6. A phytosterol formulation as claimed in one of claims 4 or 5 additionally comprising from 0.1 to 70% by weight of one or
25 more plasticizers.
7. A phytosterol formulation as claimed in one of claims 4 to 6 additionally comprising from 0.01 to 70% by weight of one or more emulsifiers.
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8. A phytosterol formulation as claimed in one of claims 4 to 7 additionally comprising from 0.01 to 50% by weight of one or more antioxidants and/or preservatives.
- 35 9. A phytosterol formulation as claimed in one of claims 1 to 8 which is water-dispersible.
10. A process for producing pulverulent phytosterol formulations defined as claimed in claim 1, which comprises
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- a₁) dissolving one or more phytosterols in a water-miscible organic solvent or in a mixture of water and a water-miscible organic solvent, or
- 5 a₂) dissolving one or more phytosterols in a water-immiscible organic solvent and
- 10 b) mixing the solution obtained as in a₁) or a₂) with an aqueous molecular dispersion or colloidal dispersion of a protective colloid, the hydrophobic phase of the phytosterol being formed as disperse phase, and
- 15 c) to produce a dry powder, freeing the resulting dispersion from the solvent and the water and drying it in the presence or absence of a coating material.
11. A process as claimed in claim 10, wherein
- 20 a) one or more phytosterols is/are dissolved in a water-miscible organic solvent, or a mixture of water and a water-miscible organic solvent, at temperatures in the range from 50°C to 240°C,
- 25 b) the resultant solution is mixed with an aqueous molecular dispersion or colloidal dispersion of a protective colloid selected from the group consisting of pectin, casein, caseinate, gum arabic, modified starch and fish gelatin, a mixture temperature of from about 35°C to 80°C being established and
- 30 c) the resultant dispersion is converted into a dry powder.
12. A process for producing pulverulent phytosterol formulations defined as claimed in claim 1, which comprises grinding at
- 35 least one phytosterol in an aqueous medium in the presence of a protective colloid and drying the resultant phytosterol suspension to produce a dry powder.
- 40 13. A process as claimed in claim 12, wherein the phytosterol suspension, after the grinding, is heated to a sufficiently high temperature to cause complete or partial melting of the phytosterols and this melt is cooled again before being converted into a dry powder.
- 45 14. A process as claimed in claim 13, wherein the phytosterol suspension, after the grinding, is kept at a temperature of from 150 to 200°C for a period of from 0.05 to 200 seconds

and is cooled to a temperature of from 20 to 80°C before conversion into a dry powder.

15. The use of the phytosterol formulations defined as claimed in
5 claim 1 for producing food supplements and as additive to
foods, animal feeds, pharmaceutical and cosmetic
preparations.
16. A food supplement, animal feed, food or pharmaceutical or
10 cosmetic preparation comprising a phytosterol formulation
defined as claimed in claim 1.

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Pulverulent phytosterol formulations

Abstract

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A description is given of pulverulent phytosterol formulations, processes for the production thereof and use thereof.

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